a cost analysis of egg production in alberta 1984

Alberta
AGRICULTURE
AGDEX 821-43

86-02838/

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Print Media Branch
Alberta Agriculture
7000 - 113 Street
Edmonton, Alberta, T6H 5T6
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Alberta Agriculture's district offices

1986 02 1M

A COST ANALYSIS OF EGG PRODUCTION IN ALBERTA 1984

by

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Production and Resource Economics Branch

ALBERTA AGRICULTURE

November 1985

FOREWORD

The main objective of this study was to determine the true cost of producing eggs in Alberta. Eggs in Alberta are priced by CEMA using national estimates of production costs. As the study demonstrates, in 1984 Alberta producers needed an additional 1.5 cents per dozen eggs to reach the target rate of return of 12 per cent. The lower Alberta return may be attributed to the relatively small flocks found in Alberta, higher capital cost and the lack of adequate representation of these flocks in the national cost of production formula. Since Alberta has no control over pricing, our primary concern in the Production and Resource Economics Branch is to provide Alberta producers with information on the economics of egg production so that they can improve their productive efficiency. Producers can begin by comparing their egg enterprise with the provincial average. They can also compare their performance with the top management group. By improving productive efficiency, producers can cut costs and/or increase production thereby increasing the profitability of the egg enterprise.

DR. CARLYLE ROSS, BRANCH HEAD
PRODUCTION & RESOURCE ECONOMICS BRANCH

ACKNOWLEDGEMENT

This report was prepared from farm records of a selected number of egg producers in Alberta who voluntarily participated in this project. Their participation was encouraged by the Alberta Egg Marketing Board.

Appreciation goes to each participating producer for his time and effort in providing the data.

Thanks are due to Alberta Agriculture Poultry Branch and specifically G. Johnson for assisting in compiling the data.

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I. INTRODUCTION

The Canadian commercial egg industry like any other controlled industry depends very heavily on a national cost of production study. To meet the original objectives of the Canadian Egg Marketing Agency (CEMA) - to establish an equitable price for commercial eggs in each province - the Agency initiated the national cost of production study. The central focus of the national study is to establish the national production cost of eggs and thus the national price.

Alberta Agriculture along with the Alberta Egg Marketing Board initiated a provincial cost study in 1983 to monitor the relation between the national cost and the provincial (Alberta) cost. This report is the summary of the second year (1984) of that study.

More specifically the objectives of the study were:

- to provide an account of the costs and economic conditions encountered in the production of commercial eggs in Alberta.
- to analyze the present price efficiency in Alberta.
- to provide the participating producers with a personal economic analysis for management purposes.
- to also provide data for Alberta Agriculture staff to use in extension education.

The provincial cost of production is a very accurate economic indicator of the industry in Alberta and can be used by the provincial egg marketing board in its dealings at the national level.

II. METHOD OF ANALYSIS

Many approaches may be used to estimate the cost of production on the farm. The approach taken in this study is to show the actual cost outlays taken from the farm records for a given production year. A computer program is utilized to summarize the data and calculate the weighted averages.

There are two basic alternatives to estimating the economic well being of the farm enterprise; A. to determine the return to family labour including the operator labour input, and B. to determine the return to equity invested in each particular enterprise. The methods as identified in Table 1, are quite compatible and in each case some major assumptions are made. In alternative A where the residual is return to family labour, the equity interest must be imputed in order to arrive at the total cost of production. The actual residual can then be measured in terms of dollars per hour of labour. On the other hand, using alternative B, the value of family labour must be imputed since there is usually no value attached to this input.

In this study the principles of alternative B are used, i.e. the objective is to determine the percentage return to equity. The imputed value of family labour is included in the variable costs. This is more practical for a number of reasons: i) incorporated farms usually allocate total labour expenses including family, ii) the imputed family labour expenses are real, considering money is used for living expenses during the year, iii) imputed interest or opportunity cost on equity, used in alternative A is a controversial issue in a period of persistent inflation of capital assets and the value is difficult to estimate.

The charges for rent are included in the cost of capital. The capital cost in this context represents the cost of ownership of resources. If resources are rented there is a charge for their use; on the other hand if resources are owned the owner must bear the cost of depreciation and interest on debt. For group averages, classification into variable and capital cost is very suitable.

TABLE 1:

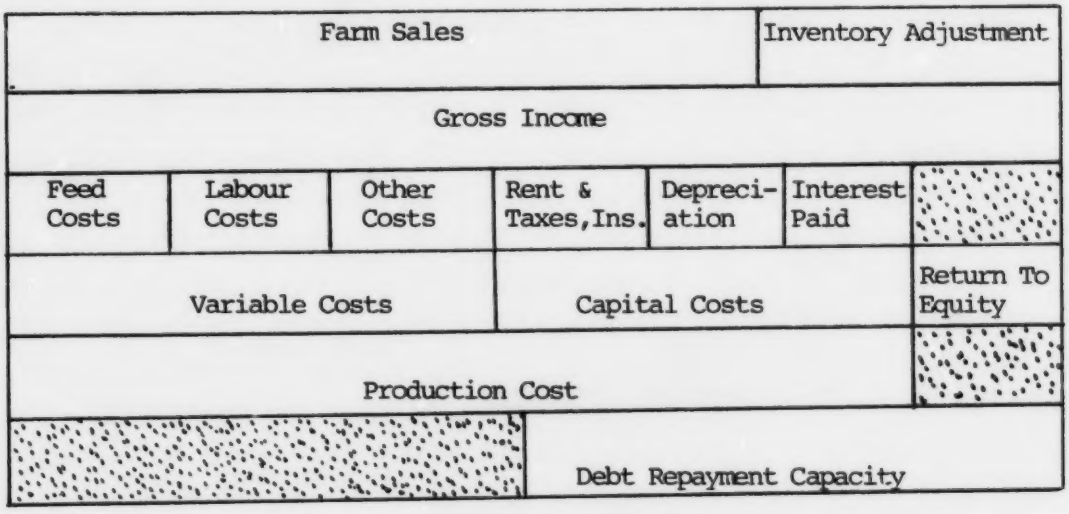
ALTERNATIVE RETURNS

A. LABOUR	B. CAPITAL
Gross Income	Gross Income
Feed	Feed
Other	Other
Hired Labour	Hired Labour
-	Family Labour (Imputed)
Variable Cost	Variable Cost
Rent	Rent
Depreciation	Depreciation
Paid Interest	Paid Interest
Equity Interest (Imputed)	-
Capital Cost	Capital Cost
Return to Family Labour	Return to Equity

The cost summaries in this report are based on enterprise analysis. Namely, the expenses and income associated with a given enterprise are allocated from the total farm activities. Producers generally handle several enterprises on the same farm, therefore, allocating the appropriate outlays for each enterprise is not easy. Expenses such as utilities, fuel, etc. are purchased on a total farm basis and require a proper allocation for different uses. The egg enterprise is defined as all activity associated with the laying operation. In some cases the operator raises his own feed; the inputs of production are allocated to the egg enterprise and the total farm according to the actual use. Consequently, the final costs of producing eggs are the true costs associated only with egg production.

Where grading was reported, it was excluded for cost estimation and only cost of ungraded eggs was assumed. Similarly the actual cost associated with home raised pullet was not considered in the layer operation; pullets were assumed to be purchased for a market price.

DIAGRAM 1



III. DATA COLLECTION

In order to obtain necessary information from layer operation, all producers on the study were required to complete a detailed input form to report their egg production income and expenses as well as investment statement. This form is shown in Appendix A of this report.

The data was obtained through a series of personal interviews with the participating producers. The information was then entered into the computer. The computer output shown in Table 2 is supporting material for the analysis. Twenty-seven egg producers across the province submitted business information for the calendar year 1984.

Sample: Although the number of all egg producers in Alberta is not that large (329), it is not necessary to study the cost of every producer. A sample of forty producers was selected to be statistically sufficient to represent the total population of producers.

It was established that the standard deviation of cost of producing eggs in the population of egg producers was 16¢ per dozen. The desired estimate of cost was assumed to be within 5¢.

The sample size was then determined by:[1]

$$n = \frac{4 \times S^2}{L^2}$$

Where: n is sample size
S is standard deviation of population
L is expected accuracy of mean

---

[1] The above equation was derived from:

(1) $S_x = \frac{S}{\sqrt{n}}$

(2) $L = S_x \times t_{0.05}$

Where: S_x is standard error of mean
$t_{0.05}$ is constant 1.96 from student's distribution table.

The study was designed to represent a cross-section of the producers by the size of bird quota. The provincial egg producers were arranged according to the quota size from smallest to largest in each area (6 areas are recognized). The sample was selected by systematic sampling to provide better representation of population. The average quota in terms of number of layers was 6,000 birds. Out of the 1983 sample of 35 producers 27 completed reports for the 12-month period in 1984.

IV. ANALYSIS OF THE RESULTS

The cost and returns summary for the layer operation in Alberta in 1984 is shown in Table 2. The provincial average of 27 producers is shown on a per bird and per dozen produced basis. This information was adopted for a specific use for the enterprise cost of production and should not in any way be construed as an income tax data or actual cash flow on a farm.

Income:

In order to assess the total egg production during the year as close as possible, the sales included value for all eggs sold through grading stations and private sales that are reported through the Marketing Board. The estimation of home use and grading station rejects is also included. The average producer price received for eggs in 1984 was 97.6¢ per dozen. This is a gross price i.e. the board levy and freight are not deducted. The value for culled birds sold was in excess of 1¢ per dozen. It is questionable whether to include the board levy in the cost or deduct it from the price and thus reduce the income. Under supply management, the amount charged for the administration of this program was not considered as a production cost, but rather a reduction of the price. Either method however does not affect the final return. The average board levy in 1984 per dozen of eggs produced accounted for 8.6¢ leaving 90.4¢ for gross income.

Pullet Cost

Pullets are purchased for a 52 week laying period, which coincides with the annual production period of this study. Pullets are replenished by purchasing or by raising them on the farm. While there is no question about the cost of purchased pullets where pullets are actually purchased, in the case of farm raised pullets the price must be estimated. Rather than analyze the cost of raising a pullet, we assumed the market value of $3.35 per bird for producers with home raised pullets. This more than compensated for the cost of raising the pullet. About 33 per cent of the producers surveyed raised their own pullets. The final average price was $3.40 per bird and this represented a cost of 16.6¢ per

ENTERPRISE RESEARCH PROJECT 1984 PROVINCIAL AVERAGE

POULTRY COSTS AND RETURNS

			TOTAL	DOLLARS PER HEN	CENTS PER DOZEN
EGG SALES	118371.56	DOZEN	115570.94	21.19	97.63
BIRDS SOLD			1621.35	0.30	1.37
SALE DEDUCTIONS			-10142.86	-1.86	-8.57
OTHER RECEIPTS					
A. GROSS INCOME			107049.06	19.63	90.43
PULLET COSTS	3.40	$/PULLET	19651.40	3.60	16.60
FEED COSTS	211.63	$/TONNE	49415.04	9.06	41.75
MEDICATION			175.04	0.03	0.15
BARN SUPPLIES			294.93	0.05	0.25
ENERGY			3097.20	0.57	2.62
MACHINERY & BUILDING REPAIRS			1550.60	0.28	1.31
FREIGHT			1676.78	0.31	1.42
OPERATING INTEREST			400.00	0.07	0.34
OTHER EXPENSES			446.26	0.08	0.38
HIRED LABOUR	395.59	HOURS	2783.74	0.51	2.35
FAMILY LABOUR	1386.15	HOURS	8944.18	1.64	7.56
LABOUR COSTS	6.58	$/HOUR	11727.91	2.15	9.91
B. TOTAL VARIABLE COSTS			88434.81	16.22	74.71
RENT			820.93	0.15	0.69
INSURANCE & TAXES			593.76	0.11	0.50
DEPRECIATION			7157.14	1.31	6.05
INTEREST (CAP. LOANS)	10.61	%	2000.10	0.37	1.69
C. TOTAL CAPITAL COSTS			10571.94	1.94	8.93
D. PRODUCTION COSTS (B+C)			99006.87	18.16	83.64
GROSS RETURN(A-B)			18614.20	3.41	15.73
RETURN TO EQUITY (A-D)	9.80	%	8042.25	1.47	6.79

INVESTMENT:

BUILDINGS	10.43	YEARS	65149.33	11.95	55.04
MACHINERY	7.08	YEARS	32839.46	6.02	27.74
LAND & SUPPLIES			2912.96	0.53	2.46
TOTAL INVESTMENT			100901.62	18.50	85.24
EQUITY	81.32	%	82056.75	15.05	69.32

MANAGEMENT:

YEARS FARMING	14.89	
AVERAGE NUMBER OF LAYERS	5452.87	
NUMBER OF FLOCKS	1.78	
PRODUCTIVITY	21.71	DOZEN
HOURS PER BIRD	0.33	
FEED CONVERSION FACTOR	1.97	KG/DOZEN
PRODUCTION/CAPITAL	1.17	DOZEN/$
MORTALITY PERCENT	8.60	

dozen. The pullet costs accounted for 17.0 per cent of the blend price received for the egg.

Feed Cost

Feed cost of layer operations is the single most significant cost item. Feed outlays accounted for 42.8 per cent of the blend egg price or 49.9 per cent of total production cost.

The participants were asked to indicate their feeding program i.e. fed quantity of each particular feed used in the layer operation. In case of home grown grain a market price was applied to determine the total value. Actual purchased prices were used for purchased feed.

Average feed conversion or feed used per dozen of eggs produced was 1.97 kg per dozen for the sample group. The average price per tonne of feed was $211.63. Please note that this is a blend price of prepared feed as well as home grown grain. The purchased ration price including delivery charge was higher. About 37 per cent of participants used home grown grain mixed with the supplement.

The total feed cost per bird amounted to $9.06 or 41.75¢ per dozen, respectively.

Labour Cost

In determining the value for labour a proper allocation of working time for layer operation is required. This is specifically important when other enterprises are present on the same farm. Three types of labour are recognized in this study: operator, family unpaid labour and hired labour. In case of hired labour a total wage including the estimation of room and board was taken into consideration. Operator's wage rate was established at $7.20 per hour. Federal statistics on farm labour in Alberta which indicate farm labour at $5.56 with board, was used as a guideline in establishing this rate. Unpaid family members regardless of age, were valued at $4.50. The objective was to determine the labour cost in agriculture and not in other alternative opportunities. The measurement of the operator's management abilities is the bottom line return and if labour is rated arbitrarily higher the return tends to be negative.

Due to the prevailing number of smaller farms, 330 hours of labour time was required for 1,000 birds per year. The total labour cost per dozen was 9.9¢, which is approximately 10.2 per cent of the blend egg price. The hired labour accounted for 23.7 per cent of the labour cost.

Other Cash Expenses

This cost category consists of various cost items such as medication, barn supplies, energy, machinery and building repairs, freight, interest on operating loans and other expenses. The value of these items is determined from actual cash outlays made by the operator during the year and appropriately allocated to the layer enterprise. In total, these expenses accounted for 6.5¢ per dozen or 6.7 per cent of the sale price. The most significant item was cost for energy followed by machinery and building repairs accounting for 60.5 per cent of this group total.

The operating interest is the actual cash outlay paid on outstanding operating loan during the year. Some other studies do not show the actual interest paid but have estimated interest on working capital.

The above cost category together with pullet cost, feed cost and labour cost form the so called variable cost of 74.7¢ per dozen.

Cost of Capital

This category consists of annual expenses for resource ownership. Rent is included in this category because it is a form of payment for capital. Depreciation, interest on capital loans and insurance and taxes are other items also included in this category.

The capital cost accounted for 9.2 per cent of the sale price which is 8.9¢ per dozen. It is important to keep down the proportion of capital cost to total cost, because these expenses must be paid regardless of whether anything is produced or not. The more volume produced for a given investment, the less significant unit capital cost becomes.

The magnitude of the capital cost is dependent on the actual value of the assets. Depreciation is based on the original (purchased) value at the time of purchase; a 5 per cent rate on buildings and 10 per cent on machinery.

In order to determine the current equity position on the farm, the original value is updated to the present by a net inflation index[1]. The value of equity is used in determining the current return on equity. The estimated current value of the investment on layer farms was $18.1 per bird. On average, only 19 per cent of this value was financed, and the rest (81%) was owners' equity.

This relatively low indebtedness resulted from a sample of communal farms that were included. Their debt is very low to non-existent. The blend interest paid for outstanding capital loans was 10.6 per cent.

The building investment accounted for 65 per cent and machinery 33 per cent of total investment, respectively. The average age was 10.4 years on buildings and 7.1 years on machinery.

For each dollar of invested capital 1.17 dozen of eggs was produced.

Returns

The well being of the farm enterprise is measured by the final return. In this particular case it is return to equity or invested portion of the assets.

After all expenses are subtracted from the gross income a return of 6.79¢ per dozen remained. This represents 9.8 per cent of invested equity.

TABLE 3: RETURN TO CAPITAL

		Per Bird
Total Investment($)	100%	18.50
Debt($)	19%	3.45
Equity($)	81%	15.05
Paid Interest Rate		10.6
Equity Interest Rate		9.8
Profit Per Cent of Sales		7.5

1 The index for each item is determined by the ratio of inflation and depreciation rates. If the inflation of, for instance, power machinery during some period is lower than the depreciation (10%), the calculated current market value then will be lower than the original value. The decline in value through use (depreciation) is not fully offset by the inflation.

Considering the 11 per cent prime interest rate in 1984, it would appear that the rate of 9.8 per cent is not quite sufficient and should be in the neighborhood of 12 per cent (investment certificates). Consequently, the actual price paid for the eggs in 1984 in Alberta was below the targeted level by 1.5¢, although the price efficiency was not entirely out of line.

The following schedule measures the magnitude of the actual return and target alternative.

TABLE 4: TARGET RETURN	1984 ACTUAL	AT 12% RETURN
	¢ Per Dozen	
Blend Price	97.6	99.1
Birds Salvage Value	1.3	1.3
Levy	-8.5	-8.5
Gross Income	90.4	91.9
Pullet Cost	16.6	16.6
Feed Cost	41.7	41.7
Other Cash Costs	6.5	6.5
Labour Cost	9.9	9.9
Capital Cost	8.9	8.9
Total Cost	83.6	83.6
Return to Equity (¢)	6.8	8.3
Return to Equity (%)	9.8	12

Management

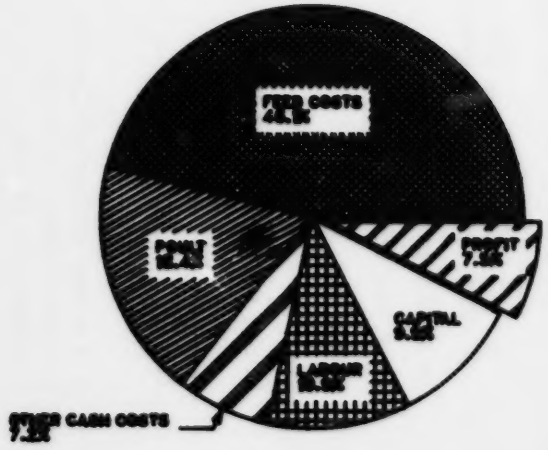
Management is concerned with the organizing, planning, directing and supervising of the farm.

Table 2 shows some of the more important indicators of the management. One very important indication of a good management is the bird productivity. Average productivity in Alberta from the surveyed participants reached the level of 21.7 dozen per bird.

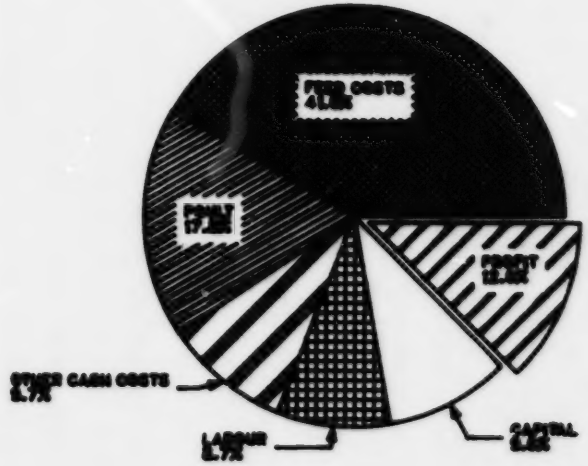
Feed, labour and capital efficiency are measured by feed conversion, hours per bird and production per capital and the values achieved in 1984 for these resources were: 1.97 kg/dozen, 0.33 hours per bird and 1.17 dozen per dollar of capital, respectively.

EGG PRODUCTION

DIVISION OF INCOME DOLLAR
PROVINCIAL AVERAGE



DIVISION OF INCOME DOLLAR
HIGH MANAGEMENT



Another management indicator is flock mortality, which is expressed in terms of per cent loss from the layer quota number. The 1984 mortality was approximately 8.6 per cent.

The size of the layer operation is given by the average number of layers. This number is important for the calculation of values such as productivity, cost per bird, etc. Normally, the average number of layers is given by beginning number plus ending number divided by two. Considering the enforcement of the quota policies, the beginning number is officially equal to quota, and the end number depends on death-loss. The calculation of average number is complicated for the multiple flock farms. The allowed quota value is replenished several times during the year depending on number of different flock ages. The average number for multiple flocks is higher and tends to be closer to the quota. The footnote[1] indicates the formula for determining the average number of layers when quota, mortality and number of flocks are given.

Using formula in the footnote the quota for average number of 5,453 layers as indicated in Table 2 would be approximately 5,588 birds. The annual death-loss of 8.6 per cent corresponds to 493 birds.

Management Group

Every farm operator tries to make management decisions that maximize the return on his farm. In the following table we attempted to identify the top management group and compare them with the standard or average group.

Five factors were selected to measure the level of management:

1. Productivity
2. Cost per Dozen
3. Dozen for Dollar of Feed
4. Dozen per Work Hour
5. Dozen per Dollar of Capital

---

[1] $A = Q \times 1 - \frac{m}{2F}$

Where: A average number of layers
Q quota number of birds
F number of flocks
m per cent mortality

The average value for each management factor was determined for the total sample of producers. The top management group (25% of producers) consists of producers who exceeded average in at least four factors. In other words the producer who exceeded average in the first four factors and was below average in the fifth factor or any other combination of four factors would qualify for this group.

The findings, as displayed in Table 5, show the magnitude of the difference between the top group and the standard group. The productivity and the cost of production were better by 3.7 and 6.5 per cent, respectively. Along with the five management factors several additional factors are listed for comparison.

TABLE 5:

	MANAGEMENT GROUPS	
	STANDARD GROUP	TOP (25%) GROUP
Productivity (Doz./Bird)	21.7	22.5
Cost per Dozen	83.6	78.2
Dozen per Dollar of Feed	2.40	2.69
Dozen per Work Hour	66.4	91.5
Dozen per Dollar of Capital	1.17	1.75
Average Price (¢)	97.6	96.8
Feed Conversion (kg/dozen)	1.97	1.87
Hours per Bird	0.33	0.25
Investment per Bird ($)	18.5	12.9
Mortality (%)	8.6	9.3
Debt/Capital Ratio	0.19	0.37
Size of Operation (no. of layers)	5453	8674
Years Farming	15	11

Table 6 illustrates the acceptable total debt load per bird at various levels of productivity and interest rates. The basic repayment capacity is given by gross return i.e. money available for resource ownership payment, consisting of rent, depreciation, paid and equity interest ($3.30 per bird). This table should be used as a guideline only; each individual situation is different.

TABLE 6: ACCEPTABLE TOTAL DEBT LOAD PER BIRD

DOZEN PER BIRD	INTEREST RATE*	10%	11%	12%	13%	14%	15%
17		12.25	11.58	10.97	10.40	9.89	9.41
19		17.72	16.75	15.87	15.06	14.31	13.62
20		20.38	19.27	18.25	17.32	16.46	15.67
22		25.86	24.45	23.16	21.97	20.88	19.88
24		31.34	29.63	28.06	26.63	25.31	24.09

* At 15 years repayment period.

V. NATIONAL PERSPECTIVE

The national cost survey conducted under the auspices of CEMA differs in some areas from our provincial concept. Consequently one must be careful in comparing the results.

First of all, the national sample is selected from the producers with 10,000 to 50,000 birds. Not many producers would qualify for this group in Alberta. Ironically, the absence of over base quota and inter-provincial quota transfer policies may well have curtailed the growth of larger enterprises in Alberta. The occurrence of excess capacity and resulting higher capital cost are evident. The sample of producers from this large farm group does not represent the provincial mosaic. The fact is that the average size in Alberta is something in the neighborhood of 6,000 birds.

In conducting cost surveys we have tried to avoid the use of imputed or estimated values as much as possible. Consequently the final costs are true costs as they occur on the Alberta farms. The debt-equity ratio, labour hours & rates, interest on capital and working capital are actual values determined from the selected sample.

The final return to equity is a barometer of industry's economic performance.

APPENDIX

I.

POULTRY FARM BUSINESS ANALYSIS 19__

Name:_____

Phone:_____

Town: | 3 | 11 | 18 | 25 | 32 | 39 | 46 | 53 | 60 | 67 | 74

		Buildings Used for Poultry								Poultry Equipment	
ORIGINAL VALUE											
POULTRY SHARE($)	02										
AGE	03										

		Poultry Equipment		Power Machinery Used for Poultry							
ORIGINAL VALUE											
POULTRY SHARE($)	04										
AGE	05										

19

		Non-Power Machinery Used for Poultry				Value of Land	Birds No. Quota	Mortality No.	Pullet No. Purchased	Supplies Inventory
ORIGINAL VALUE						Site ac:___				
POULTRY SHARE($)	06									Begin.
AGE	07					Farm Receip.	Egg Rec. %	Years Farm.	No. of Flocks	End

		Outstanding Loans on:				Poultry Receipts					
		Land	Buildings	Machinery	Other Cap.	XL Eggs	Large	Medium	Small	B	C
VALUE											
POULTRY SHARE($)	08										
INTEREST RATE	09					Quantity (Doz.)					

II.

POULTRY FARM BUSINESS ANALYSIS 19__

3	11	18	25	32	39	46	53	60	67	74
	Cracks					Private Sales				
	Doz.	Value	(Doz.) Rejects	($) Board Fees	($) Freight	Doz.	Value	Birds Sale	Pullet Purchases	Operating Interest($)
TOTAL FARM									Price:____	
POULTRY SHARE($) 10										
	Medication Cost	Barn Supplies	Utilities	Fuel, Oil Grease	Machinery Repairs	Building Repairs	Insurances Taxes	Custom Work	Cash Rent	Other Expenses
TOTAL FARM										
POULTRY SHARE($) 11										

	Grain Feed			Rations and Supplements					Other Feed	
	Barley			Starter						
QUANTITY FED per DAY (kg)										
NO. of DAYS										
TOTAL TONNES 12										
PURCHASE PRICE 13										
HOME GROWN PRICE* 14										

	Operator	Hired Paid Labour				Unpaid Family Labour				
POULTRY CHORES (hours/day)										
NO. of DAYS										
POULTRY HOURS 15										
WAGES INCLUDING BOARD 16	per Hour*									
						per Hour*				

*Office Use

ENTERPRISE RESEARCH PROJECT 1984 TOP MANAGEMENT GROUP AVERAGE

POULTRY COSTS AND RETURNS

			TOTAL	DOLLARS PER HEN	CENTS PER DOZEN
EGG SALES	195407.37	DOZEN	189161.00	21.81	96.80
BIRDS SOLD			2572.39	0.30	1.32
SALE DEDUCTIONS			-16871.77	-1.94	-8.63
OTHER RECEIPTS					
A. GROSS INCOME			174861.56	20.16	89.49
PULLET COSTS	3.38	$/PULLET	31082.64	3.58	15.91
FEED COSTS	198.93	$/TONNE	72696.37	8.38	37.20
MEDICATION			368.00	0.04	0.19
BARN SUPPLIES			114.29	0.01	0.06
ENERGY			5337.79	0.62	2.73
MACHINERY & BUILDING REPAIRS			4070.33	0.47	2.08
FREIGHT			4641.59	0.54	2.38
OPERATING INTEREST			1405.71	0.16	0.72
OTHER EXPENSES			1105.29	0.13	0.57
HIRED LABOUR	974.86	HOURS	7575.84	0.87	3.88
FAMILY LABOUR	1160.00	HOURS	7648.07	0.88	3.91
LABOUR COSTS	7.13	$/HOUR	15223.89	1.76	7.79
B. TOTAL VARIABLE COSTS			136045.87	15.68	69.62
RENT			3142.86	0.36	1.61
INSURANCE & TAXES			1262.71	0.15	0.65
DEPRECIATION			7932.85	0.91	4.06
INTEREST (CAP. LOANS)	10.67	%	4457.86	0.51	2.28
C. TOTAL CAPITAL COSTS			16796.26	1.94	8.60
D. PRODUCTION COSTS (B+C)			152842.12	17.62	78.22
GROSS RETURN(A-B)			38815.70	4.47	19.86
RETURN TO EQUITY (A-D)	31.41	%	22019.45	2.54	11.27

INVESTMENT:

BUILDINGS	8.44	YEARS	71245.56	8.21	36.46
MACHINERY	5.95	YEARS	36906.04	4.25	18.89
LAND & SUPPLIES			3728.57	0.43	1.91
TOTAL INVESTMENT			111880.19	12.90	57.25
EQUITY	62.65	%	70094.44	8.08	35.87

MANAGEMENT:

YEARS FARMING	11.14	
AVERAGE NUMBER OF LAYERS	8674.46	
NUMBER OF FLOCKS	2.00	
PRODUCTIVITY	22.53	DOZEN
HOURS PER BIRD	0.25	
FEED CONVERSION FACTOR	1.87	KG/DOZEN
PRODUCTION/CAPITAL	1.75	DOZEN/$
MORTALITY PERCENT	9.26	